# Suicidal behavior disorder as a diagnostic entity in the DSM-5 classification system: advantages outweigh limitations

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Suicidal behavior takes over a million lives worldwide every year. Non-fatal suicidal behavior is estimated to be 25 to 50 times more common (1). Finding ways to identify those at risk is a key public health goal, but researchers and clinicians alike have been stumped in the quest to decrease suicide rates using primary, secondary and tertiary prevention strategies. Our predictors simply do not work well, especially in identifying short-term risk.

One potential contributor to the poor performance of predictors may relate to how well they are identified and tracked in medical records. We have proposed a remedy for an essential risk factor for both suicide attempt and suicide: a prior history of suicidal behavior. Defining suicidal behavior disorder as a separate diagnosis (2) and providing clearly delineated criteria would bring suicidal behavior in line with parameters established by the WPA, promoting common, cross-national nomenclature and language for psychiatric disorders. Importantly, it would lead to methods to identify suicidal behavior in individual patients, with prominent documentation in medical records, key to secondary and tertiary prevention strategies.

## WHY SHOULD SUICIDAL BEHAVIOR BE A SEPARATE DIAGNOSIS?

Although suicidal behavior often occurs in the context of psychiatric conditions, this is not invariably the case. For example, in the US, about 10% of people who die by suicide have no identifiable mental disorder. In China, estimates rise to 37% (3). On the other hand, even among the psychiatric conditions associated with high risk for suicidal behavior, most patients do not engage in it. For example, studies of the general population reveal that, among those who meet criteria for bipolar disorder, 29% report a lifetime history of suicide attempt (4). This means that the vast majority does not have such behavior. Thus, suicidal behavior does not appear to be an intrinsic dimension of any particular psychiatric disorder.

Considering suicidal behavior a comorbid condition is more apt and comports well with what is known about its epidemiology, which shows that it co-occurs with a vast array of psychiatric conditions. However, in direct contrast to this observation, our current nosology includes suicidal ideation and suicide attempts as a symptom of either major depressive episodes or borderline personality disorder. This implies that suicidal behavior is not as central a concern in schizophrenia, alcohol use disorder or post-traumatic stress disorder. Yet all of these disorders are associated with significant risk for suicide attempt or death.

### Defining suicidal behavior as a separate diagnosis can make approaches to its identification better integrated into clinical practice

Patient examinations start with an ascertainment of the presenting problem. From there, the clinician fleshes out the current diagnosis, conducts an overview of symptoms to determine whether additional comorbid conditions are present, and undertakes a mental status examination focused on the current mental state. If there is no evidence for depression or borderline personality disorder and the patient does not report suicidal ideation or behavior during the mental status examination, there is no natural place for the clinician to be primed to identify past suicidal behavior.

The fact that suicidal ideation waxes and wanes over time sets up a perilous situation in which key information may be missed. Moreover, even in cases when the past suicide attempt is identified, data about suicide risk is often lost during hand-offs and is not included in discharge summaries (5). Hospitals or clinics with robust methods for documentation of suicide risk may be able to structure medical records so that this data is always recorded, but in less structured environments, the risk of non-identification is significant.

### Suicidal behavior meets validity and reliability criteria as well as other psychiatric conditions

Interestingly, suicidal behavior meets the criteria for diagnostic validity set forth by Robins and Guze in 1970 (6). It is clinically well-described, associated with biological markers, amenable to a strict differential diagnosis, confirmed in follow-up studies to occur at higher rates in those with a past

diagnosis, and familial. In a white paper identifying characteristics of diagnoses to be included in DSM-5, it was suggested that proposed diagnoses should be: a) a behavioral or psychological syndrome or pattern that occurs in an individual; b) associated with clinically significant distress or disability; c) diagnostically valid (e.g., have prognostic significance, respond to treatment); d) clinically useful (e.g., enhance assessment and treatment); and e) reflective of an underlying psychobiological disturbance. Yet, diagnoses should not simply be culturally sanctioned responses or reflect solely social deviance or conflicts with society. In addition, three types of validators have to be present (7): antecedent validators, concurrent validators and predictive validators. Suicidal behavior meets all of these criteria.

As to antecedent validators, the presence of a psychiatric condition is certainly the most recognized risk factor for suicidal behavior. However, environmental risk factors such as unemployment, marital disruptions and financial crises are also clearly linked to risk. From familial and twin studies, suicidal behavior is known to aggregate in families, independent of the transmission of mood or other psychiatric disorders (8). Of note, there are also well-known variations in suicide and suicide attempt rates depending on sociodemographic (sex, age) and cultural factors (ethnicity, country of origin, religion). Thus, the four major categories of antecedent validators are present in suicidal behavior.

In terms of concurrent validators, there is ample evidence for the presence of concomitant features that are unrelated to diagnostic criteria, but signal risk for suicidal behavior. Examples include features from cognitive (problem solving difficulties, cognitive rigidity), emotional (hopelessness, agitation, depressed mood), temperament (aggression, impulsivity), and personality (borderline, narcissistic or antisocial personality disorders) domains. There are also several biological markers associated with risk, such as the central nervous system serotonergic hypofunction and impaired negative feedback of the hypothalamic-pituitary-adrenal axis frequently observed in both attempters and those who die by suicide. Importantly, suicidal behavior is comorbid with many diagnoses, ranging from schizophrenia to alcohol use disorders to mood disorders. However, other disorders, such as Cluster A and C personality disorders, appear to convey less risk.

Three categories of predictive validators exist and one is easily met by suicidal behavior: diagnostic stability. Perhaps the most clearly documented predictor of future suicidal behavior is a history of suicide attempt. However, like many psychiatric conditions, course of illness is highly variable. Some individuals only make one suicide attempt in their life, whereas others may go on to make many attempts or to die by suicide. As far as treatment response is concerned, suicidal behavior is similar to other conditions wherein several treatments are of utility, such as clozapine for suicidal behavior in schizophrenia or cognitive therapy, but not all individuals respond.

Another key factor in determining the eligibility of a disorder for inclusion in DSM-5 was evidence for reliability and validity of the definition. The definition of suicidal behavior in DSM-5 Section III is based on the one proposed by O'Carroll et al in 1996 (9), endorsed by the Institute of Medicine in 2002. It is consistent with the US Centers for Disease Control definition and the Food and Drug Administration definition, both based on the Columbia Classification Algorithm for Suicide Attempts (C-CASA) (10). Data from a number of sources document that this definition is reliable. For example, data collected by Columbia Suicide History Form shows an inter-rater reliability coefficient of 0.97. This same definition is used by the Columbia-Suicide Severity Rating Scale (C-SSRS) (11), which has excellent validity when compared to determinations made by an expert evaluation board (>95% sensitivity and >95% specificity for suicide attempts).

## LIMITATIONS

Several objections to suicidal behavior as a diagnosis have been raised. Critics are concerned that suicidal behavior is a symptom. However, other diagnoses such as enuresis or pyromania are also included in DSM-5, although they are arguably less complex than suicidal behavior. In particular, suicidal behavior has several dimensions based on the degree of intent to die, the level of detail employed in planning, or the violence of the method.

Another criticism is that considering suicidal behavior as a diagnosis may lead to the "medicalization" of behaviors such as homicide. However, while the vast majority of suicides are associated with psychiatric conditions, only 34% of homicides are (12). Moreover, suicidal behavior is already a focus for physicians and other clinicians and clearly in the medical domain. Of course, homicide and assault can be expressions of psychopathology, for example in the context of psychosis (12), but this appears to be so in a minority of cases.

Finally, concerns that inclusion of suicidal behavior in DSM-5 may increase liability for psychiatrists have been raised. However, at least in the US, patient suicide has been a leading factor in lawsuits against psychiatrists for decades. Instead of increasing liability, embracing suicidal behavior as a distinct disorder may enhance our ability to communicate during hand-offs and to maintain focus on it as a significant clinical concern.

Critically, its inclusion may enhance research based on medical records and large insurance or national databases, which are some of the few resources where a large enough base population to generate enough suicides exist, and can provide opportunities to uncover novel predictors of risk.

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